Methodology to Calculate Exposure to a Breast-Feeding Infant:

(1) Calculate PCB intake for the mother from eating fish (example assumes 1 ppm PCB in resident fish and ingestion rate of 142 g/day of resident fish)
(2) Calculated the concentration of PCBs in breast-milk
(3) Calculate infant exposure assuming consumption of breast-milk.
(4) Risk Characterization:

(a) Lifetime Cancer Risk = 2×10^{-3}

(b) Non-Cancer Hazard Quotient

	HQ
Assume 1 year of breastfeeding and use EPA RfD =	3,200
Assume 1 year of breastfeeding, 6 years of resident fish consumption and use EPA RfD =	600
Assume 1 year of breastfeeding and use ATSDR sub-chronic (2 weeks to 1 year) MRL =	2,100

(c) Compare to Background – 75 times background breastmilk PCB levels

Comparisons to PH Fish (RME Exposure Point Concentrations):

Breast-feeding Child
Bass by river mile – 0.25 to 4.5 ppm
Lifetime Cancer Risk – 5×10^{-4} to 9×10^{-3}
HQ = 525 to 9,450 using ATSDR MRL
Carp (site-wide) – 5.9 ppm (i.e., HQ = 12,000 using ATSDR MRL)

Adult
Bass by river mile- 0.25 to 4.5 ppm
Lifetime Cancer Risk - 4×10^{-4} to 8×10^{-3}
HQ = 30 to 500